



Local Urban District of Tyndall-Garson

Public Water System Annual Report -2017-

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Table of Contents

1. Description of Water System
 - i. Water Supply Source
 - ii. Treatment Process
 - iii. Distribution System
 - iv. Storage Reservoirs
 - v. Service Connections
 - vi. Classification and Certification

2. Disinfection
 - i. Disinfection Method
 - ii. Monitoring Requirements and Performance Results

3. Water System Incidents and Corrections
4. Drinking Water Safety Orders
5. Boil Water Advisories
6. Enforcement Action
7. Major Expenses
8. Future Expansion/Major Expenditures
9. Chemistry and Bacteria Results

1. Description of Water System

i) Water Supply Source

The Rural Municipality of Brokenhead receives its ground water from two wells that are located on the water treatment plant facility property. These wells are both at a depth of 220 feet and the pump placement is at approximately 140-150 feet deep.

ii) Treatment Process

A Reverse Osmosis (membrane treatment unit) is used for the treatment process. This filtering system is a single-train, three-stage filtering system. Raw well water is forced through the filters resulting in an average of 98% removal of metals and minerals that can be corrosive and harmful to household plumbing and appliances.

iii) Distribution System

Treated water is pumped from a storage reservoir by five different distribution pumps, four 25-horsepower duty pumps and one 5-horsepower jockey pump. The average fire flow rate is 950 US GPM with approximately 94 fire hydrants throughout the public water system. All distribution lines are PVC and Poly constructed and varies in size from 2 inches up to 10 inches.

iv) Storage Reservoirs

The storage reservoirs used for storing treated water have a capacity to hold 228,000 gallons (1,035,120 liters) of water.

v) Service Connections

Currently the system has metered 622 services connected. These connections include 610 domestic and 12 commercial connections. There are approximately 10 connections to be completed.

vi) Classification and Certification

-Class 2 Water Treatment Facility & Class 2 Distribution Facility

-Certification of Operators:

- Grant Plischke: Level 3 Water Treatment & Level 2 Water Distribution
- Brent Paseska: Level 2 Water Treatment & Level 2 Water Distribution
- Todd Weselak: Level 2 Water Treatment & Level 2 Water Distribution
- Scott Peluk: Level 1 Water Treatment & Level 1 Water Distribution

2. Disinfection

i) Disinfection Method

The disinfection system injects 12% sodium hypochlorite (chlorine) into the treated water by means of a chemical pump at the point of entry into storage reservoir. This treatment is a method of controlling the disease-causing bacteria and organisms that can be found in water.

ii) Monitoring Requirements and Performance Results

The Drinking Water Safety Act requires that the free chlorine residual entering the distribution system must be a minimum of 0.50mg/L at all times and 0.10mg/L at any point in the distribution system. These residuals are maintained and monitored daily and results are recorded and sent to the regional drinking water officer at the end of each month. In 2017, the Rural Municipality of Brokenhead has met all requirements 100% in regards to monitoring and reporting disinfection residuals leaving the treatment plant and the distribution system.

3. Water System Incidents and Corrective Actions

There were no issues within the Rural Municipality of Brokenhead public water system for this reporting year.

4. Drinking Water Safety Orders

There were no drinking water safety orders issued for the Rural Municipality of Brokenhead public water system for this reporting year.

5. Boil Water Advisories

- i) There was no boil water advisories issued for the Rural Municipality of Brokenhead public drinking water system for this reporting year.
- ii) The boil water advisory issued for all private wells within the Local Urban District of Tyndall-Garson in July 2000 has been removed. The boil water advisory will no longer be mailed, but it is the responsibility homeowners with a private well to undertake regular water quality testing, complete well maintenance, and

install water treatment equipment where required to ensure their water is safe for drinking and other domestic purposes.

- iii) By-Law No. 2011-05 "Management and Regulation of the Local Urban District of Tyndall-Garson Water and Sewer System" ensures that all residents within the LUD will be connected to the public water system prior to December 31, 2009 and does not allow households to remain hooked up to private wells for human consumption. In 2010 a minimum charge for residents not on system was applied.

6. Enforcement Action

There was no enforcement actions against the Rural Municipality of Brokenhead required for this reporting year.

7. Major Expenses

There were no major expenses for this reporting year.

8. Future Expansion/Major Expenditures

There are no anticipated expansions in the near future.

9. Chemistry/Bacteria Results

Please see attached.

10. Compliance Audit

Please see attached.